CLAIMS

We claim:

1. An gauge-based instrument for measuring the sound pressure within a vehicle comprising:

a cylindrical gauge housing, said cylindrical gauge housing having a front portion, a rear portion and a diameter, said front portion constructed and arranged for securement of a faceplate;

a faceplate, said faceplate having sound pressure level markings thereon, said markings being visible through said front portion of said housing;

a gauge motor disposed adjacent to said faceplate;

a signal processing means for receiving a signal indicative of the sound pressure level within said vehicle, said circuit controlling said gauge motor based on said signal;

a pointer extending out of said gauge motor and movable by said gauge motor;

wherein said sound pressure level gauge is mountable within a standard gauge mount.

2. A vehicular sound pressure instrument as set forth in claim 1 including a pointer light source to emit light through said pointer as said pointer is pivoted by said gauge motor.

3. A vehicular sound pressure instrument as set forth in claim 2 wherein said light source is chosen from a group consisting of light bulbs, Light Emitting Diodes and Electro-luminescence, wherein said light source emits light of a different wavelength such that said light source can be used to identify different sound level conditions.

4. A vehicular sound pressure instrument as set forth in claim 1 wherein said signal processing means is adapted to store a peak sound pressure level during operation of said vehicle;

wherein said peak sound pressure may be recalled and displayed on said faceplate during and after operation of said vehicle.

5. A vehicular sound pressure instrument as set forth in claim 4 wherein said front portion of said cylindrical gauge housing is constructed and arranged to include a rotating bezel, said rotating bezel having a larger diameter than said cylindrical housing diameter;

wherein rotation of said bezel in a first direction recalls said peak sound pressure level and rotation of said

bezel in a second direction resets said peak sound pressure to zero.

6. A vehicular sound pressure instrument as set forth in claim 4 wherein said faceplate is constructed and arranged to include at least one switch;

wherein operation of said at least one switch in a first mode recalls said peak sound pressure level and operation of said at least switch in a second mode resets said peak sound pressure to zero.

7. A vehicular sound pressure instrument as set forth in claim 1 wherein said faceplate markings indicate decibels.

8. A vehicular sound pressure instrument as set forth in claim 1 wherein said faceplate includes a digital display for digitally indicating said sound pressure level within said vehicle.

9. A vehicular sound pressure instrument as set forth in claim 5 wherein said rotating bezel includes a rubber cover for isolating said vehicular sound pressure instrument from unwanted vibration and aesthetically enhancing said rotating bezel.

10. A vehicular sound pressure instrument as set forth in claim 1 wherein said cylindrical housing is constructed and arranged for mounting in a pod type gauge cluster mount;

wherein said pod type gauge cluster mount is adapted to mount on the A-pillar of said vehicle.

11. A vehicular sound pressure instrument as set forth in claim 1 wherein said cylindrical housing is constructed and arranged for mounting in a cup type gauge mount;

wherein said cup type gauge mount is adapted to mount on the dash of said vehicle.

12. A vehicular sound pressure instrument as set forth in claim 1 wherein said cylindrical housing is constructed and arranged for mounting in a panel type gauge cluster mount;

wherein said panel type gauge cluster mount is adapted to mount on the dash of said vehicle.

13. A vehicular sound pressure instrument as set forth in claim 1 wherein said circuit means includes at least one microphone, said microphone being positioned at about ear level within said vehicle, said microphone constructed and arranged for electrical communication with said signal processing means.

14. A vehicular sound pressure instrument as set forth in claim 13 wherein said faceplate is adapted to secure said microphone.

15. A vehicular sound pressure instrument as set forth in claim 1 wherein said sound pressure level instrument includes a backlighting source, said backlighting source emitting light such that said light is reflected within said cylindrical housing and refracted out of said front portion of said cylindrical housing.

16. A vehicular sound pressure instrument as set forth in claim 15 wherein said backlighting source is chosen from a group consisting of light bulbs, Light Emitting Diodes and Electro-luminescence, wherein said backlighting source emits light of a different wavelength such that said backlighting source can be used to identify different sound pressure levels.

17. A vehicular sound pressure instrument as set forth in claim 1 wherein said cylindrical housing diameter is about two and one-sixteenth inches.

18. A vehicular sound pressure instrument as set forth in claim 1 wherein said cylindrical housing diameter is about two

and five-eighths inches.

19. An instrument for measuring the sound pressure level within a vehicle comprising:

a cylindrical gauge housing, said cylindrical gauge housing having a front portion, a rear portion and a diameter, said front portion constructed and arranged for securement of a faceplate;

a faceplate, said faceplate having sound pressure level markings thereon, said faceplate adapted to secure a plurality of light emitting diodes positioned with respect to said sound pressure level markings, said markings and said light emitting diodes being visible through said front portion of said housing;

a signal processing means for receiving a signal indicative of the sound pressure level within said vehicle, said signal processing means controlling operation of said plurality of light emitting diodes based on said signal;

wherein said sound pressure instrumemnt is mountable within a standard gauge mount.

20. A vehicular sound pressure instrument as set forth in claim 19 wherein said circuit means is adapted to store a peak sound pressure level during operation of said vehicle;

wherein said peak sound pressure level may be recalled and displayed on said faceplate during and after operation of said vehicle.

21. A vehicular sound pressure instrument as set forth in claim 20 wherein said front portion of said cylindrical gauge housing is constructed and arranged to include a rotating bezel, said rotating bezel having a larger diameter than said cylindrical housing diameter;

wherein rotation of said bezel in a first direction recalls said peak sound pressure level and rotation of said bezel in a second direction resets said peak sound pressure to zero.

22. A vehicular sound pressure instrument as set forth in claim 20 wherein said faceplate is constructed and arranged to include at least one switch;

wherein operation of said at least one switch in a first mode recalls said peak sound pressure level and operation of said at least one switch in a second mode resets said peak sound pressure to zero.

23. A vehicular sound pressure instrument as set forth in claim 19 wherein said faceplate markings indicate decibels and said light emitting diodes are progressively activated with respect to sound pressure levels within said vehicle.

24. A vehicular sound pressure instrument as set forth in claim 19 wherein said faceplate includes a digital display for digitally indicating said sound pressure level within said vehicle.

25. A vehicular sound pressure instrument as set forth in claim 21 wherein said rotating bezel includes a rubber cover for isolating said sound pressure instrument from unwanted vibration and aesthetically enhancing said rotating bezel.

26. A vehicular sound pressure instrument as set forth in claim 19 wherein said cylindrical housing is constructed and arranged for mounting in a pod type gauge cluster mount;

wherein said pod type gauge cluster mount is adapted to mount on the A-pillar of said vehicle.

27. A vehicular sound pressure instrument as set forth in claim 19 wherein said cylindrical housing is constructed and arranged for mounting in a cup type gauge mount;

wherein said cup type gauge mount is adapted to mount on the dash of said vehicle.

28. A vehicular sound pressure instrument as set forth in claim 19 wherein said cylindrical housing is constructed and arranged for mounting in a panel type gauge cluster mount;

wherein said panel type gauge cluster mount is adapted to mount on the dash of said vehicle.

29. A vehicular sound pressure instrument as set forth in claim 19 wherein said circuit means includes at least one microphone, said microphone being positioned at about ear level within said vehicle, said microphone constructed and arranged for electrical communication with said circuit means.

30. A vehicular sound pressure instrument as set forth in claim 29 wherein said faceplate is adapted to secure said microphone.

31. A vehicular sound pressure instrument as set forth in claim 19 wherein said sound pressure level instrument includes a backlighting source, said backlighting source emitting light such that said light is reflected within said cylindrical housing and refracted out of said front portion of said

cylindrical housing.

32. A vehicular sound pressure instrument as set forth in claim 31 wherein said backlighting source includes a plurality of light bulbs wherein each of said plurality of light bulbs emits light of a different wavelength such that each of said plurality of light bulbs can be used for different sound pressure levels to identify said different sound pressure levels.

33. A vehicular sound pressure instrument as set forth in claim 19 wherein said cylindrical housing diameter is about two and one-sixteenth inches.

34. A vehicular sound pressure instrument as set forth in claim 19 wherein said cylindrical housing diameter is about two and five-eighths inches.